Listing of Claims

The following listing of claims will replace all prior versions, and listings, of claims in the subject application:

Claims 1-2 (canceled).

3. (currently amended) [[The]] A gateway unit ~~as claimed in claim 1~~ that is connected to a packet network and a PSTN and realizes a real-time facsimile communication between a facsimile apparatus on the PSTN and a partner terminal unit on the packet network, comprising:

a communication controller configured to adjust the required network bandwidth corresponding to a transmission speed set up between the facsimile apparatus and the partner terminal unit to become equal to or narrower than the allocated network bandwidth,

wherein the communication controller adjusts the required network bandwidth by demanding a reassignment of network bandwidth of the gatekeeper unit where the required network bandwidth corresponding to a predetermined transmission speed provided by the facsimile control signal received from the partner terminal unit in the packet network on the receiving side, or from the facsimile apparatus in the PSTN on the receiving side is wider than the allocated network bandwidth allocated by the gatekeeper unit at starting the communication.

4. (currently amended) [[The]] A gateway unit ~~as claimed in claim 1~~ that is connected to a packet network and a PSTN and realizes a real-time facsimile communication between a facsimile apparatus on the PSTN and a partner terminal unit on the packet network, comprising:

a communication controller configured to adjust the required network bandwidth corresponding to a transmission speed set up between the facsimile apparatus and the partner terminal unit to become equal to or narrower than the allocated network bandwidth,

wherein when the required network bandwidth corresponding to a predetermined transmission speed provided by the facsimile control signal received from the partner terminal unit in the packet network on the receiving side is wider than the allocated network bandwidth, the communication controller adjusts the required network bandwidth by altering information content indicative of the transmission speed in the facsimile control signal to a transmission speed that requires equal to or narrower than the allocated network bandwidth, converting the facsimile control signal into a modem signal and transmitting the modem signal to the facsimile apparatus in the PSTN on the transmitting side.

5. (currently amended) [[The]] A gateway unit ~~as claimed in claim 1~~ that is connected to a packet network and a PSTN and realizes a real-time facsimile communication between a facsimile apparatus on the PSTN and a partner terminal unit on the packet network, comprising:

a communication controller configured to adjust the required network bandwidth corresponding to a transmission speed set up between the facsimile apparatus and the partner terminal unit to become equal to or narrower than the allocated network bandwidth,

wherein when the required network bandwidth corresponding to a predetermined transmission speed provided by the facsimile control signal received from the facsimile apparatus in the PSTN on the receiving side is wider than the allocated network bandwidth, the communication controller adjusts the required network bandwidth by altering information content indicative of the transmission speed in the facsimile control signal to a transmission

speed that requires bandwidth equal to or narrower than the allocated network bandwidth, converting the facsimile control signal into a packet and transmitting the packet to the partner terminal unit in the packet network.

6. (currently amended) [[The]] A gateway unit ~~as claimed in claim 1~~ that is connected to a packet network and a PSTN and realizes a real-time facsimile communication between a facsimile apparatus on the PSTN and a partner terminal unit on the packet network, comprising:

a communication controller configured to adjust the required network bandwidth corresponding to a transmission speed set up between the facsimile apparatus and the partner terminal unit to become equal to or narrower than the allocated network bandwidth,

wherein when the required network corresponding to a predetermined transmission speed provided by the facsimile control signal received from the facsimile apparatus in the PSTN on the transmitting side is wider than the allocated network bandwidth, the communication controller adjusts the required network bandwidth by transmitting a dummy training failure signal to the facsimile apparatus on the transmission side in response to a predetermined modem training signal received from the facsimile apparatus in the PSTN on the transmitting side, until the required network bandwidth corresponding to a transmission speed provided by the facsimile control signal that will be retransmitted from the facsimile apparatus on the transmitting side becomes equal to or narrower than the allocated network bandwidth.

7. (currently amended) [[The]] A gateway unit ~~as claimed in claim 1~~ that is connected to a packet network and a PSTN and realizes a real-time facsimile communication between a

facsimile apparatus on the PSTN and a partner terminal unit on the packet network, comprising:

a communication controller configured to adjust the required network bandwidth corresponding to a transmission speed set up between the facsimile apparatus and the partner terminal unit to become equal to or narrower than the allocated network bandwidth,

wherein when the required network bandwidth corresponding to a predetermined transmission speed provided by the facsimile control signal received from the partner terminal unit in the packet network on the transmitting side is wider than the allocated network bandwidth, the communication controller adjusts the required network bandwidth by transmitting a dummy training failure signal to the partner terminal unit on the transmitting side in response to a modem training signal received from the partner terminal unit in the packet network on the transmitting side, until the required network bandwidth corresponding to a transmission speed provided by the facsimile control signal that will be retransmitted from the partner terminal unit on the transmitting side becomes equal to or narrower than the allocated network bandwidth.

Claims 8-12 (canceled).

13. (currently amended) [[The]] A gateway controlling method ~~as claimed in claim 11~~ which controls a gateway unit that is connected to a packet network and a PSTN and realizes a real-time facsimile communication between a facsimile apparatus on the PSTN and a partner terminal unit on the packet network, comprising:

a controlling method configured to control the gateway unit which performs an adjustment such that required network bandwidth corresponding to a transmission speed set

up between the facsimile apparatus and the partner terminal unit becomes equal to or narrower than the allocated network bandwidth,

wherein the adjustment is performed such that the required network bandwidth becomes equal to or narrower than the allocated network bandwidth, by demanding the required network bandwidth of the gatekeeper unit for a reassignment of network bandwidth where the required network bandwidth corresponding to a predetermined transmission speed provided by the facsimile control signal received from the partner terminal unit in the packet network on the receiving side, or from the facsimile apparatus in the PSTN on the receiving side is wider than the allocated network bandwidth allocated by the gatekeeper unit at starting the communication.

14. (currently amended) [[The]] A gateway controlling method ~~as claimed in claim 11~~ which controls a gateway unit that is connected to a packet network and a PSTN and realizes a real-time facsimile communication between a facsimile apparatus on the PSTN and a partner terminal unit on the packet network, comprising:

a controlling method configured to control the gateway unit which performs an adjustment such that required network bandwidth corresponding to a transmission speed set up between the facsimile apparatus and the partner terminal unit becomes equal to or narrower than the allocated network bandwidth,

wherein the adjustment is performed such that the required network bandwidth becomes equal to or narrower than the allocated network bandwidth where the required network bandwidth corresponding to a predetermined transmission speed provided by the facsimile control signal received from the partner terminal unit in the packet network on the

receiving side is wider than the allocated network bandwidth, by altering information content indicative of the transmission speed in the facsimile control signal to a transmission speed that requires equal to or narrower than the allocated network bandwidth, converting the facsimile control signal into a modem signal and transmitting the modem signal to the facsimile apparatus in the PSTN on the transmitting side.

15. (currently amended) [[The]] A gateway controlling method ~~as claimed in claim 11~~ which controls a gateway unit that is connected to a packet network and a PSTN and realizes a real-time facsimile communication between a facsimile apparatus on the PSTN and a partner terminal unit on the packet network, comprising:

a controlling method configured to control the gateway unit which performs an adjustment such that required network bandwidth corresponding to a transmission speed set up between the facsimile apparatus and the partner terminal unit becomes equal to or narrower than the allocated network bandwidth,

wherein the adjustment is performed such that the required network bandwidth becomes equal to or narrower than the allocated network bandwidth, where the required network bandwidth corresponding to a predetermined transmission speed provided by the facsimile control signal received from the facsimile apparatus in the PSTN on the receiving side is wider than the allocated network bandwidth, by altering information content indicative of the transmission speed in the facsimile control signal to a transmission speed that requires bandwidth equal to or narrower than the allocated network bandwidth, converting the facsimile control signal into a packet and transmitting the packet to the partner terminal unit in the packet network.

16. (currently amended) [[The]] A gateway controlling method ~~as claimed in claim 11~~ which controls a gateway unit that is connected to a packet network and a PSTN and realizes a real-time facsimile communication between a facsimile apparatus on the PSTN and a partner terminal unit on the packet network, comprising:

a controlling method configured to control the gateway unit which performs an adjustment such that required network bandwidth corresponding to a transmission speed set up between the facsimile apparatus and the partner terminal unit becomes equal to or narrower than the allocated network bandwidth,

wherein the adjustment is performed such that the required network bandwidth becomes equal to or narrower than the allocated network, where the required network corresponding to a predetermined transmission speed provided by the facsimile control signal received from the facsimile apparatus in the PSTN on the transmitting side is wider than the allocated network bandwidth, by transmitting a dummy training failure signal in response to a predetermined modem training signal received from the facsimile apparatus in the PSTN on the transmitting side, until the required network bandwidth corresponding to a transmission speed provided by the facsimile control signal that will be retransmitted from the facsimile apparatus on the transmitting side becomes equal to or narrower than the allocated network bandwidth.

17. (currently amended) [[The]] A gateway controlling method ~~as claimed in claim 11~~ which controls a gateway unit that is connected to a packet network and a PSTN and realizes a real-time facsimile communication between a facsimile apparatus on the PSTN and a partner

terminal unit on the packet network, comprising:

a controlling method configured to control the gateway unit which performs an adjustment such that required network bandwidth corresponding to a transmission speed set up between the facsimile apparatus and the partner terminal unit becomes equal to or narrower than the allocated network bandwidth,

wherein an adjustment is performed such that the required network bandwidth becomes equal to or narrower than the allocated network bandwidth, where the required network bandwidth corresponding to a predetermined transmission speed provided by the facsimile control signal received from the partner terminal unit in the packet network on the transmitting side is wider than the allocated network bandwidth, by transmitting a dummy training failure signal to the partner terminal unit on the transmitting side in response to a modem training signal received from the partner terminal unit in the packet network on the transmitting side, until the required network bandwidth corresponding to a transmission speed provided by the facsimile control signal that will be retransmitted from the partner terminal unit on the transmitting side becomes equal to or narrower than the allocated network bandwidth.

Claims 18-19 (canceled).

20. (currently amended) [[The]] A communication system ~~as claimed in claim 18~~ that realizes a real-time facsimile communication between a facsimile apparatus on a PSTN and a partner terminal unit on a packet network, the gateway unit comprising:

a communication controller configured to adjust required network bandwidth

corresponding to a transmission speed set up between the facsimile apparatus and the partner terminal unit to become equal to or narrower than the allocated network bandwidth,

wherein the communication controller adjusts the required network bandwidth by demanding a reassignment of network bandwidth of the gatekeeper unit against the allocated network bandwidth where the required network bandwidth corresponding to a predetermined transmission speed provided by the facsimile control signal received from the partner terminal unit in the packet network on the receiving side, or from the facsimile apparatus in the PSTN on the receiving side is wider than the allocated network bandwidth allocated by the gatekeeper unit at starting the communication.

21. (currently amended) [[The]] A communication system ~~as claimed in claim 18~~ that realizes a real-time facsimile communication between a facsimile apparatus on a PSTN and a partner terminal unit on a packet network, the gateway unit comprising:

a communication controller configured to adjust required network bandwidth corresponding to a transmission speed set up between the facsimile apparatus and the partner terminal unit to become equal to or narrower than the allocated network bandwidth,

wherein when the required network bandwidth corresponding to a predetermined transmission speed provided by the facsimile control signal received from the partner terminal unit in the packet network on the receiving side is wider than the allocated network bandwidth, the communication controller adjusts the required network bandwidth by altering information content indicative of the transmission speed in the facsimile control signal to a transmission speed that requires equal to or narrower than the allocated network bandwidth, converting the facsimile control signal into a modem signal and transmitting the modem

signal to the facsimile apparatus in the PSTN on the transmitting side.

22. (currently amended) [[The]] A communication system ~~as claimed in claim 18~~ that realizes a real-time facsimile communication between a facsimile apparatus on a PSTN and a partner terminal unit on a packet network, the gateway unit comprising:

a communication controller configured to adjust required network bandwidth corresponding to a transmission speed set up between the facsimile apparatus and the partner terminal unit to become equal to or narrower than the allocated network bandwidth,

wherein when the required network bandwidth corresponding to a predetermined transmission speed provided by the facsimile control signal received from the facsimile apparatus in the PSTN on the receiving side is wider than the allocated network bandwidth, the communication controller adjusts the required network bandwidth by altering information content indicative of the transmission speed in the facsimile control signal to a transmission speed that requires bandwidth equal to or narrower than the allocated network bandwidth, converting the facsimile control signal into a packet and transmitting the packet to the partner terminal unit in the packet network.

23. (currently amended) [[The]] A communication system ~~as claimed in claim 18~~ that realizes a real-time facsimile communication between a facsimile apparatus on a PSTN and a partner terminal unit on a packet network, the gateway unit comprising:

a communication controller configured to adjust required network bandwidth corresponding to a transmission speed set up between the facsimile apparatus and the partner terminal unit to become equal to or narrower than the allocated network bandwidth,

wherein when the required network corresponding to a predetermined transmission speed provided by the facsimile control signal received from the facsimile apparatus in the PSTN on the transmitting side is wider than the allocated network bandwidth, the communication controller adjusts the required network bandwidth by transmitting a dummy training failure signal in response to a predetermined modem training signal received from the facsimile apparatus in the PSTN on the transmitting side, until the required network bandwidth corresponding to a transmission speed provided by the facsimile control signal that will be retransmitted from the facsimile apparatus on the transmitting side becomes equal to or narrower than the allocated network bandwidth.

24. (currently amended) [[The]] A communication system ~~as claimed in claim 18~~ that realizes a real-time facsimile communication between a facsimile apparatus on a PSTN and a partner terminal unit on a packet network, the gateway unit comprising:

a communication controller configured to adjust required network bandwidth corresponding to a transmission speed set up between the facsimile apparatus and the partner terminal unit to become equal to or narrower than the allocated network bandwidth,

wherein when the required network bandwidth corresponding to a predetermined transmission speed provided by the facsimile control signal received from the partner terminal unit in the packet network on the transmitting side is wider than the allocated network bandwidth, the communication controller adjusts the required network bandwidth by transmitting a dummy training failure signal to the partner terminal unit on the transmitting side in response to a modem training signal received from the partner terminal unit in the packet network on the transmitting side, until the required network bandwidth corresponding to a transmission speed provided by the

facsimile control signal that will be retransmitted from the partner terminal unit on the transmitting side becomes equal to or narrower than the allocated network bandwidth.

Claims 25-26 (canceled).

27. (currently amended) [[The]] A gateway unit ~~as claimed in claim 1~~ that is connected to a packet network and a PSTN and realizes a real-time facsimile communication between a facsimile apparatus on the PSTN and a partner terminal unit on the packet network, comprising:

a communication controller configured to adjust the required network bandwidth corresponding to a transmission speed set up between the facsimile apparatus and the partner terminal unit to become equal to or narrower than the allocated network bandwidth,

wherein an allocation demand for required network bandwidth is issued to a gatekeeper unit on the packet network prior to starting a communication, the communication through the packet network is performed within an allocated network bandwidth allocated by the gatekeeper unit in response to the allocation demand, while a packetized facsimile control signal received from the partner terminal unit through the packet network is converted in real-time into a modem signal and transmitted to the facsimile apparatus through the PSTN, and a facsimile control signal received from the facsimile apparatus through the PSTN as a modem signal is packetized in real-time and transmitted to the partner terminal unit through the packet network.

28. (currently amended) [[The]] A gateway controlling method ~~as claimed in claim 11~~ which controls a gateway unit that is connected to a packet network and a PSTN and realizes a real-time facsimile communication between a facsimile apparatus on the PSTN and a partner

terminal unit on the packet network, comprising:

a controlling method configured to control the gateway unit which performs an adjustment such that required network bandwidth corresponding to a transmission speed set up between the facsimile apparatus and the partner terminal unit becomes equal to or narrower than the allocated network bandwidth,

wherein a demand for network bandwidth allocation is issued to a gatekeeper unit on the packet network prior to starting a communication, the communication through the packet network is performed within an allocated network bandwidth allocated by the gatekeeper unit in response to the demand, while a packetized facsimile control signal received from the partner terminal unit through the packet network is converted in real-time into a modem signal and transmitted to the facsimile apparatus through the PSTN, and a facsimile control signal received from the facsimile apparatus through the PSTN as a modem signal is packetized in real-time and transmitted to the partner terminal unit through the packet network.

29. (currently amended) [[The]] A communication system ~~as claimed in claim 18~~ that realizes a real-time facsimile communication between a facsimile apparatus on a PSTN and a partner terminal unit on a packet network, the gateway unit comprising:

a communication controller configured to adjust required network bandwidth corresponding to a transmission speed set up between the facsimile apparatus and the partner terminal unit to become equal to or narrower than the allocated network bandwidth,

wherein a gateway unit connected to the packet network and the PSTN issues a demand for network bandwidth allocation to a gatekeeper unit on the packet network prior to starting a communication, and the communication through the packet network is performed within an

allocated network bandwidth allocated by the gatekeeper unit in response to the demand, while a packetized facsimile control signal received from the partner terminal unit through the packet network is converted in real-time into a modem signal and transmitted to the facsimile apparatus through the PSTN, and a facsimile control signal received from the facsimile apparatus through the PSTN as a modem signal is packetized in real-time and transmitted to the partner terminal unit through the packet network.